Section 2. Coal

Coal prices are developed for the following three categories: coking coal; steam coal (all noncoking coal); and coal coke imports and exports.

Coking coal, used in the industrial sector only, is a high-quality bituminous coal that is used to make coal coke. Steam coal, which may be used by all sectors, includes anthracite, bituminous coal, subbituminous coal, and lignite. In the industrial sector, coal consumption is the sum of coking coal and steam coal. The industrial coal price is the quantity-weighted average price of these two components.

Imports and exports of coal coke are available only on the national level and are accounted for in the industrial sector. Coal coke imports and exports are reported separately and are not averaged with other coal prices and expenditures.

Coking Coal

Coking coal is generally more expensive than steam coal; therefore, it is identified separately in the development of the price estimates. Coking coal prices are those paid at coke plants for coal received and include insurance, freight, and taxes.

Physical Unit Prices: All Years

Source publications contain physical unit prices for States, groups of States, or Census divisions. Individual State prices are used directly for their respective States. Where individual State prices are not available, the associated group or Census division prices are assigned. Wherever individual State, group, or Census division prices are unavailable, prices are assigned from adjacent or nearby States or Census divisions or from States with similar coal use patterns as shown in Table TN1.

Btu Prices: All Years

Btu prices for States are calculated from the physical unit prices and the conversion factors for coking coal. U.S. Btu prices are calculated as the average of the State Btu prices, weighted by consumption data from the State Energy Data System (SEDS).

Data Sources

Prices

2000 forward: Energy Information Administration (EIA), *Annual Coal Report* for the following year (i.e., 2003 data were obtained from the *Annual Coal Report 2004*), Table 35 (2000), Table 34 (2001 forward), http://www.eia.doe.gov/cneaf/coal/ page/acr/acr_sum.html.

1996 through 1999: EIA, *Coal Industry Annual 2000*, Table 96.

1981 through 1995: EIA, *Quarterly Coal Report*, October-December issue, Table A3 (1981–1991), Table 39 (1992–1994), and Table 31 (1995), http://tonto.eia.doe.gov/ FTPROOT/coal/qcrhistory.htm.

1977 through 1980: EIA, *Coke and Coal Chemicals*, Table 19 (1977), Table 15 (1978), and Table 7 (1979, 1980).

Table TN1. Coking Coal State Group Price and Adjacent State Price Assignments

State	Years	State or Division Prices Assigned
AL	1999, 2001	East South Central
	2000	U.S.
CA	1970–1982	CA, CO, UT
CO	1970–1982	CA, CO, UT
IL	1986–1998	IN
	1999–2001	East North Central
IN	1997	East North Central
KY	1970–1987	KY, MO, TN, TX
	1988–1998	OH
	1999, 2001	East South Central
	2000	U.S.
MD	1970, 1971	MD, NJ, NY
	1983–1991, 1993	PA
MI	1979	MI, MN, WI
	1980–1985, 1987	MI, WI
	1988–1991, 1993–1998	OH
	1999–2001	East North Central
MN	1970–1978	MN, WI
	1979	MI, MN, WI
MO	1970–1987	KY, MO, TN, TX
	1988	AL
NJ	1970, 1971	MD, NJ, NY
NY	1970, 1971	MD, NJ, NY
	1972–1982	MD, NY
	1983–1998	PA
	1999	Middle Atlantic
	2000, 2001	East North Central
OH	1997–2001	East North Central
PA	1997–1999	Middle Atlantic
	2000, 2001	East North Central
TN	1970–1987	KY, MO, TN, TX
	1988–1991	AL
TX	1970–1987	KY, MO, TN, TX
UT	1970–1982	CA, CO, UT
	1983–1986	TX
	1988–1998	IN
	1999–2001	East North Central
VA	1970, 1971, 1976, 1977	WV
	1978–1982	VA, WV
	1983–1986	KY
	1987–1998	OH
	1999–2001	East North Central
WI	1970–1978	MN, WI
	1979	MI, MN, WI
	1980–1985, 1987	MI, WI
WV	1978–1982	VA, WV
	1983–1986	KY
	1987–1998	OH
	1999–2001	East North Central

1970 through 1976: Bureau of Mines, U.S. Department of the Interior, *Minerals Yearbook*, "Coke and Coal Chemicals" chapter, Table 22.

Consumption

1970 forward: EIA, State Energy Data System, coking coal consumption.

Conversion Factors: All Years

Conversion factors for all States and years can be found in the ASCII comma-delimited data file at http://www.eia.doe.gov/emeu/states/sep_use/total/csv/use_convfac.csv.

Steam Coal

Steam coal is used in all sectors. Price data are generally available in the electric power, residential, and industrial sectors. However, no price data are directly available in the transportation and commercial sectors, and industrial sector steam coal prices are assigned to these two sectors. Data sources and calculations for estimating coal prices are discussed by sector. Estimates of the amount of steam coal consumed by sector are taken from SEDS and are adjusted for process fuel consumption in the industrial sector. (See the discussion in Section 7, "Consumption Adjustments for Calculating Expenditures," at http://www.eia.doe.gov/emeu/states/sep_fuel/notes/consum_adjust.pdf.)

Residential Sector

Residential sector steam coal price estimates are intended to represent the average prices for coal purchased by residential customers and include taxes.

Prices: 1979 Foward

Residential steam coal Btu prices for 1979 forward are not available. Spot prices for coal paid by the electric power sector are used in a regression equation to estimate residential steam coal prices for 1979 forward. The residential steam coal prices calculated for 1974 through 1978 from the American Gas Association *Gas Househeating Survey (GHS)* and the average Btu spot prices from the EIA *Cost and Quality of Fuels for Electric Utility Plants (C&Q)* for 1974 through 1978 are used to develop the regression equation. Electric power coal spot prices from the *C&Q* for 1979 through 2001 are converted from cents per million Btu to dollars per million Btu.

Some States have *GHS* residential prices during the 1974 through 1978 period to use in the regression analysis, but are missing electric power sector prices in the 1979 forward data used to calculate prices. For these missing data, spot prices are assigned from other States for use in the regression, as shown in Table TN2. *C&Q* prices for ND and MT for some years result in a negative price when used in the regression; therefore MN spot prices are assigned to ND for use in the regression and the WY final residential sector steam coal price is assigned to MT as shown in Tables TN2 and TN3.

Price estimates for 1974 through 1978 for some States are not available because there was no consumption. To calculate prices for 1979 forward, these States are assigned the final prices from selected States as shown in Table TN3. In addition, several States are assigned the simple average of the final prices of adjacent States as shown in Table TN3. Alaska residential coal prices are estimated by using a different methodology, described on page 15.

In 2002, electric power coal spot prices are estimated using consumption and cost data from FERC Form 423, "Monthly Cost and Quality of Fuels for Electric Plants," database to be used as residential sector steam coal prices. Quantities of coal consumed by electric utilities that were purchased at spot prices that are multiplied by the heat content of that coal at each facility. Btu prices are multiplied by that consumption to obtain expenditures by facility. The results are summed by State. State-level expenditures are then divided by State-level consumption to obtain the State-level prices to be used as residential coal prices.

Table TN2. Residential Sector Coal Spot Price Assignments from *C&Q*, 1979 Forward

State	Years	State Prices Assigned
CO	1979, 1981	KS
CT	1975	NY
	1976–1979, 2001–2003	NH
	1980–1987, 1993–1995, 2000	MA
DC	1976–1999	MD
	2001–2003	VA
ID	1974, 1979–1982, 1996–2003	NV
	1975–1977	SD
	1978	ND
	1983–1995	CO
MA	1975	VT
	1976–1979, 2001	NH
MD	2001–2003	VA
ME	1974, 1975, 1981, 1983	VT
	1976–1980, 1982, 1986, 1996–2003	NH
	1984, 1985	MA
MT	1974, 1975, 1978	ND
	1976, 1977	SD
	1979–1982	NV
ND	1976, 1977	SD
	1979–2001	MN
NH	1974, 1975, 1981, 1983	VT
	1984, 1985	MA
NV	1975–1978, 1983–1989, 1992, 1993, 1995	CO
RI	1974	CT
	1975	VT
	1976–1979, 2001–2003	NH
	1980–2000	MA
SD	1978, 1984	ND
	1979–1983, 1986, 1987, 1989, 1991–2001	MN
UT	1975–1978, 1980, 1983, 2000	CO
	1979	NV
VT	1976, 1980, 2001–2003	NH
	1984–2000	MA
WA	1970, 2001–2003	OR
	1974–1978, 1983–1985	CO
	1979–1982	NV
WY	1974–1976, 1978, 1982, 1983, 1985	CO

Table TN3. Residential Sector Coal Final Price Assignments, 1979 Forward

State	Years	State and Averaged Final Prices Assigned
AR	1980, 1982, 1984, 1985, 1987–1995, 1998 2002	AL
	1999	MO
	1981	MO, OK, TN, TX
	1983	MO, MS, OK, TN
AZ	1982, 1984, 1985	CA, NM, NV, UT
	1987, 1988, 1990–1995, 1998–2003	UT
CA	1979–1985	NV
	1987–2003	WA
FL	1980–1996, 1998, 1999–2002	GA
	2003	AL
LA	1980, 1982, 1984, 1986, 1988, 1991, 1993, 1995, 1997, 2000	AL
MS	1979, 1980, 1983, 1984, 1986–1995, 1997	AL
	1985	AL, AR, TN
MT	1986–2003	WY
NM	1979–2003	CO
OK	1979–1999, 2001–2003	CO
OR	1979, 1980, 1982–2000	WA
	1981	CA, ID, NV, WA
TX	1980–1982, 1985–2003	CO

In 2003, State electric power coal spot prices are estimated by calculating the ratio of the 2002 U.S. average price to the 2003 U.S. average price, from Form EIA-423, "Monthly Cost and Quality of Fuels for Electric Plants." That ratio is applied to the 2002 State-level electric power sector coal spot prices to estimate residential sector coal prices for each State.

Prices: 1971 Through 1978

For 1971 through 1978, Btu steam coal prices are calculated by using data from *GHS*. The price for a State is equal to the simple average of the city/utility price observations for that State. For 1971 and 1972, *GHS* reports physical unit prices rather than Btu prices (as published for 1973 through 1978) and, therefore, the State-level conversion factors for this sector from SEDS are used to convert to Btu prices for those years. AK residential coal prices are estimated by using a different methodology, described on page 15.

A simple average of price observations in CT, MA, ME, NH, RI, and VT is assigned to each of these States. To impute other missing prices

Table TN4. Residential Sector Spot Coal Price Assignments, 1971-1978

State	Years	State Assigned or Averaged Prices
AL	1971	TN
AR	1977, 1978	AL
CA	1971, 1972, 1974, 1978	NV
DC	1971-1978	MD
DE	1971, 1972, 1974, 1976, 1977	MD
GA	1971	NC, TN
	1972	AL, NC, TN
ID	1977	MT, UT, WY
KS	1971, 1972	CO, MO
MN	1971	IA, ND, WI
	1972	IA, WI
MS	1978	AL
MT	1971	ID, ND, WY
	1972, 1973	ID, WY
ND	1972	IA, WI
	1973	MN, SD
	1974	MN, MT, SD
NE	1971, 1972	CO, IA, MO, WY
	1975	CO, IA, KS, MO, SD, WY
NJ	1971, 1972, 1974, 1977, 1978	DE, NY, PA
NM	1971	CO
NV	1971, 1972, 1975	ID, UT
	1973	ID, OR, UT
OK	1971–1978	CO
OR	1971–1978	WA
SC	1971, 1972	NC
SD	1971	IA, ND, WY
	1972	IA, WY
TX	1971–1974, 1977	CO
UT	1974, 1978	CO, ID, NV, WY
WA	1971, 1972, 1974	ID
	1977	MT, UT, WY
WV	1971, 1972	KY, MD, OH, PA, VA

in the 1971 through 1978 period, States are assigned simple averages of adjacent State prices or are directly assigned the single price of an adjacent or nearby State as listed in Table TN4.

Prices: 1970

Since State-level coal price data for 1970 are not available from either *GHS* or *C&Q*, the 1970 residential sector coal prices are calculated by using the 1971 through 1978 data from the *Statistical Yearbook* for the 39 States, with some reported coal use from 1971 through 1983 and regression analysis.

For estimating the 1970 prices, States missing *Statistical Yearbook* data are assigned prices as follows: ID for 1970 through 1978 from MT; MA for 1976 through 1978 from CT; ME for 1970 through 1978 from NH; RI for 1973 and 1975 through 1978 from CT; and WA for 1970 through 1972 from OR. DC, DE, and MD are all assigned the combined *Statistical Yearbook* price for those States. Wherever individual State prices are unavailable, prices are assigned from an adjacent or nearby State as follows: CA from NV; NM from CO; OK from CO; OR from WA; and TX from CO. AK residential coal prices are estimated by using a different methodology, described as follows.

Alaska Prices: All Years

The AK residential coal prices for 1994 forward are estimated from an informal survey of the single coal supplier in the State.

The AK residential Btu prices for 1978 through 1993 are estimated from the WA State prices during that period. To estimate the AK price for each year that AK has consumption, the average ratio of AK-to-WA prices during 1970 through 1977 is applied to the WA price.

AK physical unit prices for 1970 through 1977 are estimated by using the ratio of AK-to-U.S. electric utility sector prices.

U.S. Prices: All Years

U.S. Btu prices are calculated as the average of the State Btu prices, weighted by consumption data from SEDS.

Data Sources

Prices

2003: EIA, unpublished U.S. spot prices for coal for 2002 and 2003 from Form EIA-423, "Monthly Cost and Quality of Fuels for Electric Plants," and 2002 electric power sector spot prices for coal by State.

1994 forward: Alaska price estimated from informal discussions with Usibelli Coal Mine Co., the only coal supplier in Alaska.

2002: FERC Form 423, "Monthly Cost and Quality of Fuels for Electric Plants,"database, available via the EIA Web site at http://www.eia.doe.gov/cneaf/electricity/page/ferc423.html.

1974 through 2001: EIA, *Cost and Quality of Fuels for Electric Plants,* average spot coal prices, http://www.eia.doe.gov/cneaf/electricity/cq/backissues.html, Table 2 (1974-1979), Table 44 (1980 through 1982), Table 49 (1983, 1984), Table 39 (1985-1989), Table 8 (1990, 1991), and Table 3 (1992 through 2001).

1971 through 1978: American Gas Association, *Gas Househeating Survey*, table titled “Competitive Fuel Prices.”

1970 through 1978: Edison Electric Institute, *Statistical Yearbook of the Electric Utility Industry*, Table 43S.

Consumption

1970 forward: EIA, State Energy Data System, residential sector coal consumption.

Conversion Factors: 1971, 1972

Conversion factors can be found in the ASCII comma-delimited data file “use_confac.csv” at http://www.eia.doe.gov/emeu/states/sep_use/total/csv/use_convfac.csv.

Commercial Sector

Commercial sector prices are assigned industrial steam coal prices. States without Btu industrial steam coal prices are assigned the prices from adjacent States, as shown in Table TN5. The Alaska prices for 1994 forward are estimated from an informal survey of the single coal supplier in the State. U.S. Btu prices are calculated as the average of all States' Btu prices, weighted by consumption data from SEDS.

Table TN5. Commercial Sector Final Price Assignments

State	Years	State Prices Assigned
CT	1980	NY
	1995–2003	MA
DC	1980–2003	MD
NH	1994, 1996-2003	MA
OK	1970	KS
OR	1999–2000	WA
RI	1982, 1983, 1991–2003	MA
VT	1993-1997, 2000, 2003	MA

Industrial Sector

Industrial coal prices from 1980 forward are taken from Form EIA-3, "Quarterly Coal Consumption and Quality Report, Manufacturing Plants," and predecessor forms, which collects quarterly data on manufacturers' coal stocks, receipts, prices, and consumption. From 1980 through 1988, all manufacturers that consumed coal were required to respond to Form EIA-3. Beginning in 1989, data are collected from only those those manufacturers that consumed 1,000 or more tons per year. Data prior to 1980 are based on the average cost of coal sold to manufacturing firms, which was reported on a monthly basis.

Physical Unit Prices: 1980 Forward

For 1984 forward, State prices are published in the EIA *Annual Coal Report* and predecessor publications. Prices include insurance, freight, and taxes. Price data for 1980 through 1983 are taken directly from Form EIA-3, and predecessor forms.

Prices for States in which data are withheld or unavailable are estimated by using simple averages of the published data for adjacent States. In a few cases, only a single adjacent State or Census division price is published and, therefore, available for the estimation. The adjacent State and Census division price assignments used for estimations are shown in Table TN6. Washington prices are withheld for 1999 forward. Washington prices are historically higher than the Census division price; therefore, the average ratio of the Washington to the Pacific Division prices for 1995 through 1998 is applied to the 1999 forward Pacific Division prices to estimate the Washington prices for those years. In 2002, the price for the Pacific Division is withheld and is estimated using the average Pacific Division price from 1999 through 2001. In 2002, the price for the New England Division is also withheld and is estimated by applying the average ratio of the New England Division price to the East North Central price from 1995 through 1998 to the 2002 East North Central Division price. Price estimates for Alaska are explained on page 18.

Physical Unit Prices: 1971, 1974 Through 1979

For 1971, and 1974 through 1979, available cost and quantity of bituminous coal, lignite, and anthracite from the *Annual Survey of Manufacturers (ASM)* or *Census of Manufacturers (CM)* are used to calculate prices as average cost per unit of sales for covered States. (States with undisclosed data are not considered covered.) Although it is not clear from the data sources, the prices probably include taxes.

For States with industrial steam coal use and for which *ASM* or *CM* data are not available in 1971 and 1974 through 1979, adjacent State simple averages of available *ASM*/*CM* data are used to impute prices. The assigned prices from adjacent States are shown in Table TN7.

Physical Unit Prices: 1970, 1972, 1973

Steam coal industrial sector prices for 1970, 1972, and 1973 (years for which no *ASM*/*CM* prices are available) are estimated by using regression techniques. Values for the independent variable are steam coal

Table TN6. Industrial Sector Steam Coal Price Assignments, 1980 Forward

State	Years	Prices Used in the Assignment
AZ	1980	CA, UT
	1981, 1984–1986	CA, CO, UT
CO	1980	KS, UT
	2000	UT, WY
	2001	KS, NE, OK, UT, WY
	2002, 2003	KS, NE, UT, WY
CT	1981–1994	New England
DC	1980, 1981	MD
DE	1980–2003	MD
FL	1980	AL, GA
HI	1982, 1983, 1987–2003	CA
ID	1999	UT, WY
KS	2000	MO
LA	1980–2003	AR, TX
MA	1980–1983	NY
	1984–2003	New England
ME	1980–1983	NY
	1984–2003	New England
MS	1980–2003	AL, AR, TN
MT	1983, 1987–1990, 1992	ID, WY
	1984–1986	ID
	1991, 1993–1998, 2000–2003	ID, SD, WY
	1999	SD, WY
ND	1980–1982	MN, MT
	1983–1990, 1992	MN
	1991, 1993–1998, 2000–2003	MN, SD
	1999	MN, SD, WY
NE	1980	IA, KS, MO
	1982, 1983, 1987–1990, 1992	CO, IA, KS, MO, WY
	1991, 1993–1999	CO, IA, KS, MO, SD, WY
	2000	IA, MO, SD, WY
NH	1980–1983	NY
	1984–1993, 1995	New England
NJ	1980–1997, 2000–2003	NY, PA
	1998, 1999	PA
NM	1980	TX, UT
	1981	CO, OK, TX
	1982, 1983	AZ, CO, OK, TX
	1984–1986	CO, OK, TX, UT
	1987	AZ, CO, OK, TX, UT
	1988–1999	AZ, CO, TX, UT
	2000, 2002, 2003	AZ, TX, UT
	2001	AZ, OK, TX, UT
NV	1980, 1981, 1984–1986	CA, ID, UT
	1983, 1987–1998, 2000–2003	AZ, CA, ID, UT
	1999	AZ, CA, UT
NY	1998, 1999	PA
OK	1980	AR, KS, MO, TX
	1984–1999	AR, CO, KS, MO, TX
	2000	AR, MO, TX
	2002, 2003	AR, KS, TX
OR	1980, 1981, 1983–1998	CA, ID, WA
	1982	CA, ID, NV, WA
	2002, 2003	CA, ID
RI	1980, 1981	NY
	1984–1990	New England
SD	1980	IA, MN, MT
	1981	IA, MN, MT, NE
	1982	IA, MN, MT, WY
	1983, 1987–1990, 1992–1995	IA, MN, WY
	1984–1986	IA, MN, NE
	2003	IA, MN, NE, WY
VT	1980–1983	NY
	1984–1992, 1997–1999	New England times Pacific 1999-2001
WV	1980	KY, MD, OH, PA, VA
WY	1980	ID, MT, UT
	1981	CO, ID, MT, NE, UT
	1984–1986	CO, ID, NE, UT

electric utility sector physical unit prices, and values for the dependent variable are the steam coal industrial physical unit prices (from *ASM* or estimated, as described above) for 1971, and 1974 through 1977. A few States are assigned electric utility prices for the dependent variable in the regression, as shown in Table TN8 on page 19. Wherever individual State prices remain unavailable after the estimation that used the above regression techniques, prices are assigned from adjacent or nearby States, as shown in Table TN9 on page 19.

Table TN7. Industrial Sector Steam Coal Price Assignments for 1971 and 1974-1979

State	Years	State Prices Used in the Assignment
AR	1971, 1972, 1974, 1975	MO, TN
	1979	MO, TN, TX
AZ	1971	CA, NV, UT
	1974–1978	CA, UT
CO	1974–1978	KS, NE, UT
	1979	UT
CT	1974–1978	MA, NY
	1979	NY
DC	1971, 1974–1979	MD, VA
DE	1971, 1974–1979	MD, NJ, PA
FL	1979	AL, GA
ID	1974	OR, UT
	1975–1978	UT
	1979	UT, WA
KS	1979	MO
LA	1978	AR
	1979	TX
MA	1979	NY
ME	1975–1978	MA
	1979	NY
MS	1971, 1974, 1975, 1979	AL, TN
	1976–1978	AL, AR, TN
MT	1974–1978	MN, NE, UT
	1979	MN, UT
ND	1974–1979	MN
NE	1979	IA, MO
NH	1971, 1974–1979	MA
NM	1971	CO, OK, TX, UT
	1974, 1976–1978	KS, UT
	1979	UT
MT	1974–1978	MN, NE, UT
	1979	MN, UT
ND	1974–1979	MN
NE	1979	IA, MO
NH	1971, 1974–1979	MA
NM	1971	CO, OK, TX, UT
	1974, 1976–1978	KS, UT
	1979	UT
NV	1974	CA, OR, UT
	1975–1979	CA, UT
OK	1974, 1975	KS, MO
	1976–1978	AR, KS, MO
	1979	MO, TX
OR	1975–1978	CA
	1979	CA, WA
RI	1971, 1974–1978	MA
	1979	NY
SD	1971, 1974	IA
	1975–1978	IA, MN, NE
	1979	IA, MN
TX	1974, 1975	KS
	1976–1978	AR, KS
VT	1971, 1974–1978	MA
	1979	NY
WA	1974	CA, OR
	1975–1978	CA
WY	1974–1978	NE, UT
	1979	UT

Physical Unit Prices: Alaska, All Years

The Alaska steam coal industrial sector prices for 1994, and 1996 forward, are estimated from an informal survey of the single coal supplier in the State. There is no steam coal consumption reported Alaska's industrial sector for 1995. For all other years with industrial steam coal use in Alaska (1993, and 1970 through 1977), prices are estimated by assuming that the ratio of the Alaska price to the U.S. price in the industrial sector is the same as the ratio of the Alaska and U.S. prices in the electric power sector.

Table TN8. Industrial Sector Price Assignments Used in the Regression Equation for 1971, and 1974-1979

State	Years	State Prices Assigned
AR	1973–1977	MO
CA	1970–1977	NV
CT	1975–1977	NY
DC	1976, 1977	MD
ID	1970–1977	MT
MA	1976, 1977	NH
ME	1970–1977	NH
OK	1973–1975	KS
OR	1973–1977	WA
TX	1970	NM
WA	1970–1972	OR

Btu Prices: All Years

Btu prices for States are calculated from the physical unit prices and the conversion factors, which vary by State and by year. U.S. Btu prices are calculated as the average of all States' Btu prices, weighted by consumption data from SEDS, adjusted for process fuel and coking coal consumption.

Data Sources

Prices

2000 forward: EIA, *Annual Coal Report* for the following year (i.e., 2003 data were obtained from the *Annual Coal Report 2004*), Table 35 (2000), Table 34 (2001 forward), http://www.eia.doe.gov/cneaf/coal/page/acr/acr_sum.html.

1991, 1996 through 1999: EIA, *Coal Industry Annual 2000,* Table 94.

1988, 1993 through 1995: EIA, *Coal Industry Annual 1997,* Table 94.

1987 and 1992: EIA, *Coal Industry Annual 1996,* Table 94.

Table TN9. Industrial Sector Final Price Assignments for 1970, 1972 and 1973

State	Years	State Prices Assigned
AR	1972	MO, TN
NH	1970, 1972, 1973	MA
RI	1970, 1972, 1973	MA
SD	1970, 1972, 1973	IA
VT	1970, 1972, 1973	MA

1985 and 1990: EIA, *Coal Industry Annual 1994,* Table 94.

1984 and 1989: EIA, *Coal Industry Annual 1993,* Table 94.

1986: EIA, *Coal Industry Annual 1995,* Table 94.

1980 through 1983: Form EIA-3, "Quarterly Coal Consumption Report–Manufacturing Plants," Table 25 (1980), Table 11 (1981 and 1982), and Table 2 (1983).

1971, 1974 through 1979: Bureau of the Census, U.S. Department of Commerce, *Annual Survey of Manufacturers* and *Census of Manufactures*, Table 4 (1971) and Table 3 (1974–1979).

1970, 1972, 1973: Steam coal electric utility sector physical unit prices used in a regression equation with industrial sector prices from 1971 and 1974 through 1979.

Consumption

1970 forward: EIA, State Energy Data System, industrial (other than coke plants) coal consumption.

Conversion Factors: All Years

Conversion factors for all States and years can be found in the ASCII comma-delimited data file at http://www.eia.doe.gov/emeu/states/sep_use/total/csv/use_convfac.csv.

Transportation Sector

Transportation use of coal accounted for 298 thousand short tons out of a total of 523,231 thousand short tons in 1970 and declined to none after 1977. Transportation sector steam coal prices are assigned from industrial sector steam coal prices. U.S. Btu prices are calculated as the average of the State Btu prices, weighted by SEDS consumption data.

Electric Power Sector

Btu Prices: 2002 and 2003

State Btu prices, including insurance, freight, and taxes, are taken from the EIA *Electric Power Monthly.* In 2002, missing States are assigned prices using average delivered cost and deliveries data from FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants," database. In 2002 and 2003, Census division prices are assigned for States not available from either source as shown in Table TN10.

Table TN10. Electric Power Sector Price Assignments, 1973 Forward

State	Years	State/Census Division Prices Assigned
CA	1989–2001	Pacific Contiguous
CT	1975–1979, 2000–2003	New England
DC	1976	MD, VA
DE	2002, 2003	South Atlantic
HI	1990–2002	Pacific Contiguous
	2003	Pacific
MA	2001	New England
MD	2001	South Atlantic
ME	1990–2003	New England
OK	1973, 1974	West South Central
	1975	CO, KS, MO, NM, TX
OR	1983, 1989	Pacific Contiguous
RI	1974	MA
VT	1980, 1983–1986	New England
WA	2001, 2002	Pacific Contiguous

Btu Prices: 1973 Through 2001

State Btu prices, including insurance, freight, and taxes, are taken from *Cost and Quality of Fuels for Electric Utility Plants (C&Q)* for 1973 through 2001 and are converted from cents to dollars per million Btu. Where individual State prices are withheld or unavailable, quantity-weighted Census division prices are assigned as shown in Table TN10. Price estimates for Alaska are explained below.

Btu Prices: 1970 Through 1972

Btu prices for States are taken from the Edison Electric Institute's *Statistical Yearbook* and are converted from cents to dollars. Delaware, DC, and Maryland are each assigned the combined price for the three States. The steam coal electric utility sector Alaska price for 1971 is estimated as discussed below.

Alaska Prices: All Years

The *C&Q* does not collect or publish prices for Alaska. The Alaska prices for 1994 forward are estimated from an informal survey of the single coal supplier in the State. Prior to that, Btu prices for Alaska are based on data from the Edison Electric Institute's *Statistical Yearbook.* For the years 1970, 1972, 1974, 1976, 1977, and 1979 through 1993, prices were taken directly from the *Statistical Yearbook*. Prices for 1971, 1973, 1975, and 1978 are estimated from the *Statistical Yearbook* prices for the United States and the average ratio of AK-to-U.S. prices for the years when AK prices are available. The 1971 and 1973 estimated prices are based on the average ratio for 1970 and 1972; the 1975 price is based on the average ratio for 1974 and 1976; and the 1978 price is based on the average ratio for 1977 and 1979.

U.S. Prices: All Years

U.S. Btu prices are calculated as the average of the State Btu prices, weighted by consumption data from SEDS.

Data Sources

Prices

2002 and 2003: EIA, *Electric Power Monthly* April issue for 2 years following year (i.e., 2003 data were obtained from the *Electric Power Monthly April 2005)*, Table 4.9.B (2002), Tale 4.10.B (2003), http://www.eia.doe.gov/cneaf/electricity/epm/matrix96_2000.html.

1994 forward: Alaska price estimated from informal discussions with Usibelli Coal Mine Co., the only coal supplier in Alaska.

2001 and 2002: FERC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants," database, available via the EIA Web site at http://www.eia.doe.gov/cneaf/electricity/page/ferc423.html.

1973 through 2000: EIA, *Cost and Quality of Fuels for Electric Utility Plants*, http://www.eia.doe.gov/cneaf/electricity/cq/backissues.html, Table 3 (1973–1979), Table 51 (1980–1982), Table 50 (1983, 1984), Table 40 (1985–1989), Table 7 (1990, 1991), and Table 2 (1992 through 2000).

1970 through 1993: Edison Electric Institute, *Statistical Yearbook of the Electric Utility Industry*, table titled "Analysis of Fuel for Electric Generation: Total Electric Utility Industry" (1970–1988), Table 29 (1989–1993).

Consumption

1970 forward: EIA, State Energy Data System, electric power sector coal consumption.

Conversion Factors: All Years

Btu prices are taken directly from the data sources; no explicit conversion factors are used.

Coal Coke, Imports and Exports

Imports and exports of coal coke are components of total U.S. energy consumption and are accounted for in the industrial sector. Prices and values of imports and exports are developed only for the United States; no attempt is made to estimate State-level prices or expenditures. Prices are f.a.s. (free alongside ship) values and do not include taxes. The quantities of U.S. coal coke imports and exports are taken from SEDS.

Physical Unit Prices: All Years

For 1980 forward, the EIA *Coke Plant Report*, the EIA *Quarterly Coal Report*, and Bureau of the Census computer tapes provide physical unit coal coke import and export prices in dollars per short ton. For 1970 through 1979, *Coke and Coal Chemicals, International Coal*, and the *Minerals Yearbook* provide coal coke import and export physical unit quantities and values in short tons and dollars, respectively. Values are equivalent to expenditures.

Btu Prices: All Years

For 1980 forward, Btu prices are computed by dividing the physical unit prices by the conversion factor to calculate prices in dollars per million Btu. For 1970 through 1979, physical unit prices are computed by dividing the import and export values by their respective quantities, and Btu prices are computed by dividing the physical unit prices by the conversion factor.

Data Sources

Prices

1989 forward: Bureau of the Census, U.S. Department of Commerce, electronic data from "Monthly Report IM 145" and "Monthly Report EM 545."
1981 through 1988: EIA, *Quarterly Coal Report*, October-December issues, Tables A11 and A13 (1981-1985) and Tables A10 and A12 (1986-1988).

1980: EIA, *Coke Plant Report*, Tables 7 and 8.
1978 through 1979: EIA, *Coke and Coal Chemicals 1979*, Tables 5 and 6.
1977: National Coal Association, *International Coal 1980*, tables titled "U.S. Imports of Solid Fuels and Customs Value" and "U.S. Exports of Coke and Value."
1976: EIA, *Coke and Coal Chemicals*, Tables 19 and 20.
1970 through 1975: Bureau of Mines, U.S. Department of the Interior, *Minerals Yearbook*, "Coke and Coal Chemicals" chapter, Tables 19 and 20.

Consumption

1970 forward: EIA, State Energy Data System, U.S. imports and exports of coal coke.

Conversion Factor: All Years

24.8 million Btu per short ton.